



The Top Hatters and Peggy Fox broadcast from the new KYW studios in Philadelphia, c. 1938. (Pennsylvania State Archives)

Radio in Pennsylvania

It was November 2, 1920. That evening in and around Pittsburgh, an estimated one thousand people were listening on “wireless” receivers and loudspeakers to the national presidential election results. Transmitted over a hundred-watt station that would become KDKA, this was something new: radio broadcasting. It would revolutionize communication just as the printing press had done in the fifteenth century, and as television would do later in the twentieth century.

Experiments with the transmission of speech and music from one point to another by wireless—or radio—had begun shortly before the turn of the twentieth century. Early pioneers were Italian physicist Guglielmo Marconi, American inventor Lee de Forest, and in Pennsylvania, the Rev. Joseph Murgas who demonstrated overland sound transmission from Wilkes-Barre’s Sacred Heart Church in 1905.

After World War I Frank Conrad, an engineer with the Westinghouse Electric & Manufacturing Com-

pany, was operating amateur station 8XK at his garage in Wilkinsburg, a Pittsburgh suburb. By late 1919, Conrad was supplementing his voice with phonograph records, and the response from enthusiastic listeners was immediate.

Soon Conrad was broadcasting for two hours on Wednesday and Saturday evenings, using records supplied by a local music store. The impact of Conrad’s broadcasts was not lost on his employer, Westinghouse, and its vice president, Harry P. Davis, and soon that company was making plans for its own radio station. A formal license for KDKA, using the temporary call letters 8ZZ, was issued on October 27, and it first went on the air, at about 8 P.M. on Tuesday, November 2, 1920.

This historic election broadcast originated from a makeshift structure atop one of the Westinghouse buildings in East Pittsburgh, and it continued until some time after midnight. In succeeding days, KDKA

was on the air from 8:30 to 9:30 each evening—establishing its claim as the first commercial radio station with a regular schedule—and soon that schedule was expanded. Prominent offerings during the first couple of years included church services, public addresses, play-by-play sports, bedtime stories for children, and music that gradually shifted from phonograph records to live concerts, culminating with the cre-

twenty-eight stations were authorized nationwide—none in Pennsylvania—but during the first half of 1922, some 360 new stations were authorized across the nation, twenty-two in Pennsylvania. Early stations included WIP and WCAU in Philadelphia, KQV in Pittsburgh, WBAX in Wilkes-Barre, and WGAL in Lancaster. Four Philadelphia stations established by mid-1922 and one in Pittsburgh were owned by major

department stores, and many others were owned by electrical supply companies, since radio offered an easy means of self-advertisement!

Radio stations were then regulated by the U.S. Department of Commerce, and most of the nearly 380 stations in the United States were licensed to broadcast on a single wavelength (near the present 830 on the AM dial). With the number of stations rapidly growing, interference became intolerable. Late in 1922, a few of the more powerful stations were permitted to shift to a second wavelength, but the need for a major restructuring was increasingly evident. On May 15, 1923, today's AM (amplitude modulation) broadcast band was born. Suddenly, stations were operating on at least fifty-eight different dial settings—with room for more—and the official basis for designating these settings was changed from wavelengths to frequencies, expressed in kilocycles (today known as kilohertz). KDKA with one thousand watts was the state's most powerful broadcaster, and other stations in Pennsylvania included WFI and WDAR in Philadelphia (which shared their new frequency), WJAS in Pittsburgh, WRAW in Reading, WSAN in Allentown, and college station WSAJ in Grove City.

Pioneering efforts in an allied field of radio—short wave—emanated from a

familiar source: Frank Conrad and Westinghouse. In the Pittsburgh suburb of Forest Hills, Conrad opened a new broadcast facility in 1923 to experiment with long-distance transmissions, and it was beaming programs to England by year's end. On October 11, 1924, Heinz employees—sitting down to banquets in sixty-two cities and three nations—heard each other's



"The WCAU Kiddies," Philadelphia, c. 1927. (Pennsylvania State Archives)

ation late in 1922 of KDKA's Little Symphony Orchestra. By the end of 1921, Westinghouse had opened additional stations in Newark, Springfield (Mass.), and Chicago—together they constituted four of the nation's first nine licensed broadcasting stations.

As people gained access to radio receiving sets, more new stations went on the air. In all of 1921,



Early crystal radio set, c. 1925. (KDKA photo)

speeches via short wave. By the 1930s, Station W8XX was one of several American stations relaying commercial broadcasts across the world by short wave—a practice that ended when the government assumed control of such programming following entry into World War II.

During this period, the vast majority of radio stations continued to occupy the AM band. By the mid-1920s, larger stations had expanded their schedules to extend from sometime in the morning until near midnight. “Uncle Wip” on WIP and “Dream Daddy” on WDAR (known as WLIT after 1924) read bedtime stories for children in Philadelphia. Live classical and semi-classical music (including opera) remained prominent, but variety shows and comedy were emerging.

On the evening of November 15, 1926, America’s first permanent radio network—the National Broadcasting Company (NBC)—was inaugurated over twenty-four stations in Pennsylvania and other Eastern and Midwestern states. By January 1927, NBC had two networks: the Red (WEAF) network and the Blue (WJZ) network, identified after their key stations in New York. Over the next few years, coast to coast, the Red net-

work broadcast many popular shows over some of the nation’s most powerful stations; its chief Pennsylvania affiliates were Philadelphia’s WFI and WLIT (still sharing one frequency) and Pittsburgh’s WCAE. The Blue network had more impressive cultural offerings but a smaller audience, and it boasted fewer strong stations; notable exceptions were Westinghouse stations, including Pittsburgh’s powerful KDKA.

Less than a year later, on September 18, 1927, another major network—the Columbia Broadcasting System (CBS)—made its debut over sixteen U.S. stations, including Philadelphia’s WCAU and Pittsburgh’s WJAS. This prospective rival to NBC had the strong support of Dr. Leon Levy, owner of WCAU, which was the first station to enroll as an affiliate and remained a key component of the CBS network for many decades. CBS started encountering financial difficulties soon after the September broadcast and it was purchased by another Philadelphian, William S. Paley in September 1928. During the next half century he would steadily build it into one of the premier broadcasting organizations of the nation.

A number of Pennsylvania’s earliest radio stations were college-owned, including WPAB, operated by

Penn State. In the early 1920s, more than two hundred educational stations were established nationwide, but many disappeared by the end of the decade. Penn State's five hundred watt station with its concerts, agricultural extension spots, chapel services, and play-by-play college sports—redesignated WPSC around January 1925—remained on the air until 1932.

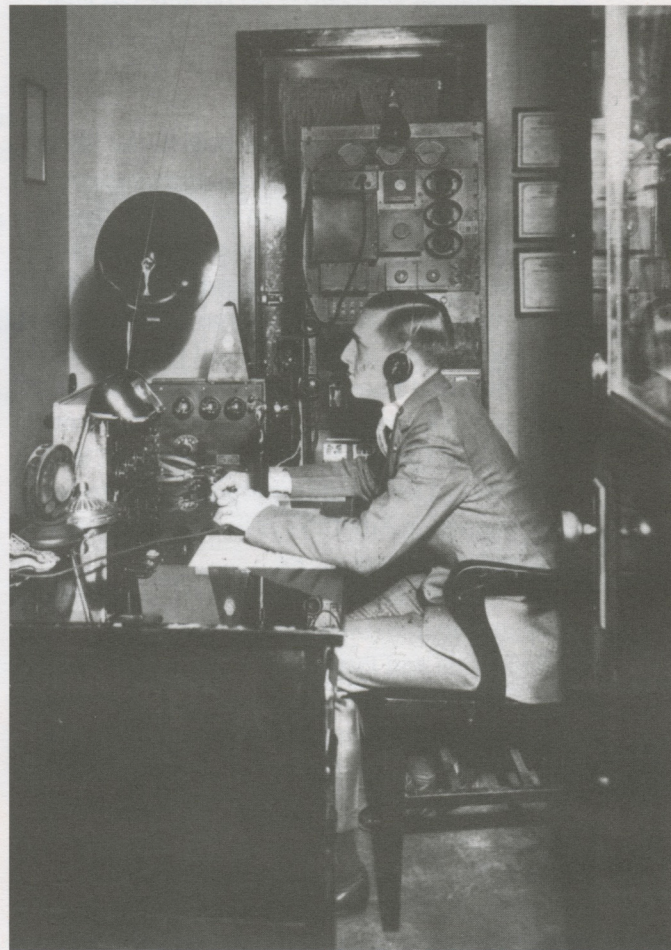
An important step toward more effective regulation of broadcasting came with the creation in 1927 of the Federal Radio Commission. At that time, about forty-six AM stations were operating in Pennsylvania (by 1934 there were only about thirty-seven). By now the nation was in the midst of the Great Depression, which had ushered in President Franklin D. Roosevelt's New Deal in 1933. One of its fruits was the creation in July 1934 of the Federal Communications Commission, which would remain broadcasting's chief regulator in the ensuing decades.

Two events in 1934-35 significantly recast the broadcasting scene in Pennsylvania's largest city. The powerful Westinghouse station KYW had been a major force in Chicago since 1921. On December 3, 1934, KYW moved to Philadelphia and became the city's outlet for the popular NBC Red network. The other event occurred on January 20, 1935, when a newly merged WFIL went on the air, replacing WFI and WLIT. In the years that followed, WFIL retained an affiliation with NBC Blue, which became a separate Blue Network in 1943 and the American Broadcasting Company (ABC) two years later. WFIL itself was acquired in 1946 by the *Philadelphia Inquirer*, which soon added WFIL-TV, the station that in 1957 brought Dick Clark's *American Bandstand* to a national television audience.

This period has been called the "Golden Age of Radio." It stretched from the late 1920s, with the rise of national networks, to the early 1950s. Major radio offerings included comedy (such as Jack Benny, and Fibber McGee and Molly), variety (Rudy Vallee's *Fleischmann Hour*), popular music (Bing Crosby, "big bands"), drama (*Lux Radio Theatre*), mystery (*The Shadow*), westerns (*The Lone Ranger*), children's programs (*Let's Pretend*), and news (Lowell Thomas and Edward R. Murrow). Cultural programming included broadcasts

year after year by the Metropolitan Opera and major symphony orchestras, as well as such programs as *Information Please*. Network radio during its "Golden Age" probably did more to impart a spirit of community to people across the United States—both urban and rural—than any other medium has done before or since.

Pennsylvanians who helped to enrich the radio scene during this long era included comedian W. C. Fields, remembered for his Sunday evening appearances with Edgar Bergen and Charlie McCarthy in the late 1930s; actor Lionel Barrymore, who portrayed Ebenezer Scrooge in broadcasts of Dickens' *A Christmas Carol* for nearly two decades; Mario Lanza, whose voice graced the



WDAR was owned and operated by Lit Brothers Department Store in Philadelphia, c. 1922. (Pennsylvania State Archives)



Edwin H. Armstrong in the early 1930s, FM was noted for its static-free high fidelity. Pennsylvania's first eight FM stations went on the air in 1941-42. In 1950 there were sixty-three stations in thirty-one Pennsylvania cities, but by 1958 the growing presence of television had diverted attention from FM, leaving only fifty-four stations.

Meanwhile, on Pennsylvania's AM band between the mid-1950s and the early 1970s, the decline of network radio—spurred by the rise of television—was becoming progressively

The historic first broadcast of KDKA (8ZZ) on November 2, 1920, featured the results of the Harding-Cox presidential election. (KDKA photo)

radio as well as screen and records in the 1950s; and James Stewart, whose radio appearances augmented his many motion picture successes.

It was during the years immediately preceding and during World War II—approximately 1938 to 1945—that radio most fully came into its own as a source of news, inspiration, and patriotic support. President Roosevelt's "fireside chats," news from network correspondents around the world, the music of Glenn Miller and Kate Smith, and the humor of Bob Hope entertaining the troops, are entwined in America's collective memory of its World War II experience.

By 1942, the number of AM stations in Pennsylvania had increased to forty-five in the Philadelphia and Pittsburgh areas and in twenty-four other cities and towns, and four years later the number of stations had risen to fifty. At the end of 1948, the great majority of radio stations were affiliated with one or another of the four national networks: NBC, CBS, ABC, and the Mutual Broadcasting System (established in 1934); six of these stations had dual affiliations. KDKA and KYW (both NBC) and WCAU (CBS) were 50,000-watt clear channel stations.

The most significant new development in radio during the 1940s was the emergence of frequency modulation (FM). First demonstrated by

evident. As the number of network shows (except for news) dwindled, stations were programmed increasingly by local announcers or disc jockeys playing recorded music geared to listener tastes.

In the history of commercial radio in Pennsylvania, a special place belongs to Philadelphia's WFLN, which for nearly half a century was one of the nation's leading classical music stations. Established on FM in 1949, it began three decades of AM/FM simulcasting in 1956. On September 5, 1997, after having been sold several times at ever-rising prices, the station ceased to exist as such. Soon, however, WFLN's music library and its daytime format were given a new home at Philadelphia's noncommercial WRTI-FM, which became a classical *and* jazz public radio station.

The growth of public broadcasting in the United States became a notable success story starting in the 1950s. By 1973, stations were on the air in Philadelphia, Harrisburg-Hershey, Erie, Scranton, and Pittsburgh (WQED.) As the twenty-first century opened, eleven major public radio (FM) stations were operating—in the cities noted above plus Allentown and State College. Four of these eleven stations are owned by universities: Penn, Temple, Penn State, and Duquesne. Stations are affiliated with National Public Radio (NPR) and/or Public Radio International (PRI). Philadelphia's WHYY originates NPR's nationally broadcast *Fresh Air*, and the alternative musical mix of WXPB's *World Cafe* is distributed across the country by PRI.

In addition to public radio stations, by 2001 Pennsylvania had nearly fifty educational stations

with more limited audiences—mainly college campus stations, programmed by and for students—as well as some seventy religious stations.

Among commercial radio stations—constituting the vast majority of stations on the air in Pennsylvania and the nation—four distinct trends emerged as the twentieth century neared its close. First, the growth of FM radio steadily gained momentum starting in the late 1960s—a crucial factor being the introduction of stereo in 1961. By the 1990s, the great majority of listeners were tuned to FM. Second, there was a sharp increase in the total number of radio stations, especially after 1980—many small towns boasted their own stations. Third, radio stations virtually abandoned the old concept of program schedules and adopted formats—“top 40,” adult contemporary, rock, alternative, and jazz on FM, and news/talk, all-news, sports, and nostalgia on AM. Country music and oldies were heard on both FM and AM. Fourth, there was a growing concentration of ownership; this accelerated during the 1990s after Congress removed restrictions on the number of radio stations under the same owner in a single market. In some markets by the close of the twentieth century, several commercial stations in the same city had a single owner.

By 2001, Pennsylvania counted 182 AM and 410 FM stations, and 96 (principally FM) streamed their audio over the Internet as well as the airwaves. In the

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early 1920s, radio had been in a real sense a novelty that thrilled its listeners as they brought in stations near and distant. In the “Golden Age” of the late twenties to mid-fifties, families arranged themselves around the living-room radio to enjoy their favorite network programs. Now, in the increasingly private world of the early twenty-first century, people were tuning in to their favorite radio formats—just as they were “channel-surfing” television and navigating the Web—on a highly individual basis. One fact, however, was clear: radio, which had suddenly become a transforming element in human lives during the 1920s, remained so many decades later—in Pennsylvania, across the nation, and indeed around the world.

by George Redman Beyer

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